

**Supplemental  
Notice of Allowability**

Application No.

10/622,130

Examiner

Robert Shiao

Applicant(s)

LIU ET AL

Art Unit

1626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to responses filed on 08/19, 2005.
2. ☒ The allowed claim(s) is/are 1-6, 9-11, 13-15, 26-37, now are 1-24.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### **DETAILED ACTION**

1. This application claims benefit of the provisional application: 60/397,367 with a filing date 07/18/2002.
2. Amendment of claims 1-6, 9-11, 13-15, 26-31, and 33-37, and cancellation of claims 7-8, 12, 16-25 in the amendment filed on August 19, 2005, is acknowledged. Claims 1-6, 9-11, 13-15, and 26-37 are pending in the application.

### ***Responses to Amendment/Arguments***

3. Since limitation of "heterodiamondoid" (i.e., formula (I)) and "replaced by a heteroatom" has been incorporated into the claims, therefore, rejection of claims 1-6, 9-11, 13-15, and 26-37 under 35 U.S.C. 112, first paragraph, has been overcome, in part, in the amendment filed on August 19, 2005.
4. Applicant's arguments regarding rejection of claims 1-6, 9-11, 13-15, and 26-37, i.e., having limitation of "higher diamondoid nucleus" of formula (I), under 35 U.S.C. 112, first paragraph, filed on August 19, 2005, have been fully considered and they are persuasive. The limitation "higher diamondoid nucleus" of formula (I)" has been found on the specification, i.e., page 25, lines 19-26, and the application No. 10/046,486 (now is US 6,858,700). Therefore, rejection of claims 1-6, 9-11, 13-15, and 26-37, i.e., having limitation of "higher diamondoid nucleus" of formula (I), under 35 U.S.C. 112, first paragraph, has been withdrawn herein. Since claims 7-8, 12, 16-21 have been cancelled, therefore, rejection of claims 7-8, 12, 16-21 under 35 U.S.C. 112, first paragraph, is obviated herein.

5. Rejection of claims 1-6, 9-11, 13-15, and 26-37 under 35 U.S.C. 112, second paragraph, has been overcome in the amendment filed on August 19, 2005. Since claims 7-8, 12, 16-21 have been cancelled, therefore, rejection of claims 7-8, 12, 16-21 under 35 U.S.C. 112, second paragraph, is obviated herein.

6. Since the provisional rejection of claims 1-6, 9-11, 13-15, and 26-37 under obviousness-type double patenting over Liu et al. copending Application No.10/622,046, is the only remaining rejection, therefore, rejection of claims 1-6, 9-11, 13-15, and 26-37 under obviousness-type double patenting, is withdrawn herein. Since claims 7-8, 12, 16-21 have been cancelled, therefore, rejection of claims 7-8, 12, 16-21 under obviousness-type double patenting, is obviated herein.

#### **EXAMINER'S AMENDMENT**

7. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee. Authorization for this examiner's amendment was given in a telephone interview with Melissa M. Hayworth on September 29, 2005. The application has been amended as follows:

In claim 6, lines 1-2, after "of claim 1", delete "comprising two or more", and insert  
--having from two to twenty--

In claim 34, line 3, after "hydroxyalkyl;", delete "heteroaryl;"

In claim 34, line 4, after "aminoalkoxy;", delete "heterocycloalkoxy;"

In claim 34, line 5, after "aryoxy;", delete "heteroaryloxy;"

In claim 34, lines 5-7, after "-C(O)Z", delete "wherein Z is hydrogen, alkyl, halo, haloalkyl, halothio, amino, monosubstituted amino, disubstituted amino, cycloalkyl, aryl, heteroaryl"

In claim 34, line 9, after "heteroalkyl,", insert

--or--

In claim 34, line 9, after "aryl", delete ", or heteroaryl"

In claim 34, line 11, after "aryl", delete ", heteroaryl,"

In claim 34, line 12, before "aralkyl", insert

--and--

In claim 34, line 12, after "aralkyl", delete ", and heteroaralkyl"

In claim 34, line 14, after "aryl,", delete ", and heteroaryl,"

In claim 34, line 14, after "aralkyl,", delete ", and"

In claim 34, line 15, delete "heteroaralkyl", and insert

--, wherein Z is hydrogen, alkyl, halo, haloalkyl, halothio, amino, monosubstituted amino, disubstituted amino, cycloalkyl, or aryl--

#### ***Reasons for Allowance***

8. The following is an examiner's statement of reasons for allowance:

Claims 1-6, 9-11, 13-15, and 26-37 are neither anticipated nor rendered obvious

over the art of record, and therefore are allowable. This invention relates to heterodiamondoids. The closest reference is Chapman et al. US 5,019,660, discloses diamondoid polymeric compositions. The difference between Chapman et al. and instant claims is that the instant compounds of formula (I) are not found in Chapman et al. Suggestion for modification of above record to obtain the instant claimed compounds has not been found. Claims 1-6, 9-11, 13-15, and 26-37 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusions***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Shiao whose telephone number is (571) 272-0707. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane can be reached on (571) 272-0699. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

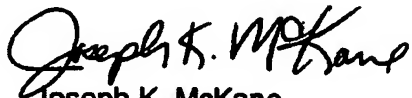
For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

R.S.

Robert Shiao, Ph.D.  
Patent Examiner  
Art Unit 1626



Joseph K. McKane  
Supervisory Patent Examiner  
Art Unit 1626

January 23, 2006

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**TAOFIQ SOLOLA**  
**PRIMARY EXAMINER**



Robert Shiao, Ph.D.  
Patent Examiner  
Art Unit 1626



Joseph K. McKane  
Supervisory Patent Examiner  
Art Unit 1626

September 29, 2005